

# THE SECOND CAMPAIGN FOR POLIOMYELITIS VACCINATION IN THE EASTERN PROVINCE: DIFFERENT STRATEGY WITH SIMILAR SUCCESS

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**هدف البحث :** للتحقق فيما إذا كان التغيير في طريقة التطعيم ضد شلل الأطفال من منزلي إلى تلقي التطعيم بنقاط محددة قد أدى إلى هبوط في نسبة التطعيم المطلوبة .  
**طريقة البحث :** انتهت الحملة الثانية للتطعيم ضد شلل الأطفال في ٢٨ رجب ١٤١٧هـ (٩ ديسمبر ١٩٩٦م) ورغبة في تقليل النفقات المادية والبشرية في هذه الحملات فقد قامت السلطات الصحية بالمنطقة الشرقية بتوفير التطعيم هذه المرة بالمراكز الصحية الأولية والمدارس والمستشفيات والمراكز التجارية . تم بعد ذلك مسح بطريقة العينات العنقودية حسب ضوابط منظمة الصحة العالمية وذلك بمنطقة الخبر والقطيف لحصر النسبة المئوية للتغطية بالطريقة الجديدة .  
**النتائج :** تم مسح عدد ١٣٩٩ منهم ٦٤٤ بالغ و٧٥٥ طفل (٣١٧ بالخبر و٤٣٨ بالقطيف) . بلغ عدد الأطفال تحت سن الخامسة ١٥٣ بالخبر و١٧٩ بالقطيف . تم تطعيم ١٤٨ (٩٦.٧٪) بالخبر و١٧٩ (١٠٠٪) بالقطيف . كان عدد الأطفال الذين لم يطعموا خمسة اثنان سعوديين وثلاثة غير سعوديين .  
**الاستنتاجات :** أوضحت هذه الدراسة أن نسبة التغطية العامة للتطعيم ضد شلل الأطفال بالمنطقة الشرقية بلغت ٩٨.٤٪ وهي أعلى من معدل الثمانين بالمائة الذي تعتبره منظمة الصحة العالمية حداً لنجاح أي حملة ويمكن استخدام هذه الطريقة بتوفير التطعيم في مواقع محددة في المناطق التي بها نسبة تعليم عالية ومستوى مرتفع من التعاون العام .  
**الكلمات المرجعية :** شلل الأطفال - الحملة الوطنية - التطعيم - المملكة العربية السعودية .

**Purpose:** To determine whether the change from the door-to-door strategy of administering the Oral Polio Vaccine (OPV) to designated vaccination points has led to less than optimal vaccination coverage.

**Methods:** The Second Bi-Annual Poliomyelitis Vaccination ended on 28 Rajab 1417H (9 December 1996G). To minimize the high cost in terms of staff and financial resources, the local authority in the Eastern Province offered the vaccinations at various primary health and commercial centers, schools and private hospitals. The WHO cluster sampling technique was used to conduct a survey in the Al-Khobar and Qatif areas to verify the percentage coverage using the new strategy.

**Results:** A total population of 1399 including 644 adults and 755 children (317 Al-Khobar, 438 Qatif) was surveyed. There were 153 children aged less than 5 years in Al-Khobar and 179 in Qatif. Of these, 148 (96.7%) in Al-Khobar were vaccinated compared to 179 (100%) in Qatif. Only 5 of the eligible children were not vaccinated, two of whom were Saudis and three non-Saudis.

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**Conclusions:** *The study shows an overall percentage coverage of 98.4 in the Eastern Province which is well above the WHO's minimal 80% target for success. This method of vaccination at assigned points may be used in areas where the literacy rate is high and public cooperation is at a maximum.*

**Key Words:** *Poliomyelitis, campaign, vaccination, Saudi Arabia*

## INTRODUCTION

The World Health Organization (WHO) established the elimination of poliomyelitis from the world as a goal.<sup>1</sup> The strategies have been clearly outlined as follows: (1) establishment and maintenance of high routine vaccination coverage with oral polio vaccine; (2) development of poliomyelitis surveillance and reporting systems; (3) establishment of national immunization days for children under five years of age; (4) "mopping-up" vaccination campaigns targeting high-risk areas where wild polio virus transmission is most likely to persist.<sup>1-4</sup> The Kingdom of Saudi Arabia (KSA) has adopted the WHO's program, applying the first 3 steps. First, the Kingdom has established and maintained routine immunization coverage. Secondly, case surveillance and identification has been done. The first national immunization during assigned days was successful in achieving more than 80% vaccination for all children aged 5 years and less. In this campaign, immunization was given by trained health workers administering the vaccine on a door-to-door basis. The cost was high in terms of staff and financial resources. In an attempt to minimize the financial and staff burden, the local authorities in the Eastern Province of Saudi Arabia decided to change the strategies of the national immunization days. Instead of administering the oral polio vaccine from door-to-door, the vaccine was supplied at designated points throughout the region. These designated points included various

health, educational and commercial centers. The general public awareness was heightened by the use of the mass media. On the eve of the national immunization days, the campaign was inaugurated by royal dignitaries. The second period of immunization started on 26 Rajab 1417H (7 December 1996) and concluded on 28 Rajab 1417H (9 December 1996). The aim of the present study was to verify whether the change in the door-to-door vaccination policy led to a less than optimal immunization coverage.

## MATERIAL AND METHODS

The standard WHO cluster technique was employed for sampling.<sup>5</sup> The randomly selected clusters of households were chosen from the Al-Khobar and Qatif areas. Each of these two cities was divided into homogenous sectors. A total of 30 clusters were selected, 15 from Al-Khobar and 15 from Qatif. All Saudi and non-Saudi residents in these households were screened using a pre-tested questionnaire in a face-to-face interview by trained professionals.<sup>6</sup> The questionnaire included information on the number of children in the household, the total number of children vaccinated in the national poliomyelitis vaccination campaign, the total number of non-vaccinated children and the reasons for non-vaccination. To ensure support and cooperation, earlier contacts with government and Ministry of Health (MOH) institutions were made and individual wishes were respected throughout the survey.



## RESULTS

A total of 307 households (Al-Khobar 154 and Qatif 153) with the total population of 1399 including 644 adults and 755 children (317 in Al-Khobar and 438 in Qatif) were surveyed. The children aged less than 5 years in Al-Khobar were 153 and 179 in Qatif. Twenty-five households in Al-Khobar and 10 households in Qatif had no children. Of the targeted population (children less than 5 years of age), 148 (97.1%) were vaccinated compared to 179 (100%) in Qatif. All the vaccinated children received their vaccinations at the primary health care centers, private hospitals or at school. In Al-Khobar 5 (3.3%) of the targeted population did not receive vaccinations. Two of the 5 eligible children who were not vaccinated were Saudis and 3 were non-Saudis. The nationalities surveyed in Al-Khobar and Qatif are shown in Table 1.

*Table 1: Frequency of nationalities surveyed in Al-Khobar and Qatif*

Area	Nationality	Percentage
Al-Khobar	Saudi	47
	Egyptian	12
	Indian	9
	Jordanian	8
	Lebanese	8
	Palestinian	6
	Yemeni	4
	Pakistani	3
	British	2
	Syrian	1
Qatif	Saudi	100

## DISCUSSION

The pledge to eradicate poliomyelitis from the globe by the year 2000 is steadily progressing under the directives of the WHO. The incidence of poliomyelitis infection is decreasing worldwide.<sup>7-11</sup> Some parts of the

world have successfully eradicated poliomyelitis<sup>12</sup> and the KSA has established several positive milestones to that end. The newly established case identification and surveillance by the MOH shows a decline in the incidence of poliomyelitis. This was most probably due to the early national vaccination campaign held in Jumada and Rajab of 1416H (November 1995). For various reasons, particularly relating to staff and financial constraints, a different strategy was adopted for the second national vaccination campaign. Distribution points for vaccination were established in the community and the public was encouraged to go to these points. This strategy was used only in the Eastern Province. Following the vaccination days a quality assurance survey using a questionnaire was conducted by trained professionals. The results showed an overall coverage of 98.4% in the Eastern Region (Al-Khobar 96.7% and Qatif 100.0%). The reasons for non-vaccination were mainly the lack of knowledge of the changed strategy and ignorance of what was happening. These problems can be rectified through mass media education and better publicity of the new strategy.

The WHO stipulates that a minimum of 80% vaccination coverage of the target population is needed for successful vaccination campaigns. In Al-Khobar, the campaign achieved 96.7% coverage. This lower-than-expected coverage in Al-Khobar is still well above the 80% target of the WHO's expectations.

The method of vaccination through distribution points on the national vaccination days, rather than door-to-door vaccination, is relatively new to the KSA. It may be used in areas where the literacy rate is high and public cooperation is maximal. This has been shown to be successful in the present study. The Ministry of Health con-

tinues to make positive strides towards the achievement of the noble goal of eradicating poliomyelitis from the Kingdom.

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